

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of	)	
	)	
Revision of the Commission's Rules	)	CC Docket No. 94-102
to Ensure Compatibility with Enhanced	)	
E911 Emergency Calling Systems	)	
	)	

To: The Commission

**Carrier Report of Cellular Mobile Systems of Saint Cloud Regarding  
Implementation of Wireless E911 Phase II Automatic Location Identification**

Cellular Mobile Systems of Saint Cloud ("CMS") hereby submits a report regarding implementation of wireless E911 Phase II Automatic Location Identification ("ALI"), in compliance with the Federal Communications Commission's ("FCC" or "Commission") Further Memorandum Opinion and Order in the above-captioned proceeding.

**I. Background / Contact Information**

CMS serves rural Minnesota and its contact information is as follows:

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Manager

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**II. E911 Phase II Location Technology Information**

CMS has yet to choose a solution for its Phase II ALI technology. However, CMS is leaning toward a hybrid solution to be provide by Nortel. The technology uses both cell sector identification and GPS. The location technology also uses a locating function within or as an overlay to the wireless network infrastructure using a combination of Time Difference of Arrival and Angle of Arrival. While CMS remains undecided at this point due to its concern about handset availability, it is leaning heavily

toward Nortel if the Nortel product becomes available and is proven to work within the time frame necessary for CMS to achieve Phase II implementation in compliance with the Commission's rules.<sup>1</sup> Whichever technology CMS selects, it intends to deploy it throughout its service area.

### **III. Testing and Verification**

CMS has yet to test any ALI solutions since it is still waiting on the Nortel product. In addition, CMS has not been able to test any handsets since none are available and CMS has yet to be given a date when ALI-capable handsets will be available. CMS anticipates using a combination of Empirical Testing Methods and Predictive Testing Methods to gauge the accuracy of the technology it eventually chooses.

### **IV. Implementation Details and Schedule**

While CMS is awaiting product availability from Nortel and handset vendors, it has developed a tentative implementation schedule to meet the FCC's handset-based rules and network-based rules. If CMS chooses a handset solution, it will begin selling ALI-capable handsets on October 1, 2001 and it will begin providing handset information to the PSAP by December 31, 2001. CMS anticipates that by August 25, 2001 it will be able to provide network-based location information to the PSAP.

### **V. PSAP Interface**

CMS has yet to receive a Phase II PSAP request. CMS will need to upgrade its software to an MTX10 feature addition and add location center hardware in order to transmit Phase II data to PSAPs.<sup>2</sup> CMS plans to subcontract the work necessary to upgrade its towers and install the necessary software.

### **VI. Handset Information**

If CMS decides to pursue a partially handset-based solution, it will run promotions in order to replace existing handsets. The price of the new ALI-capable handsets, unavailable at this time, will affect CMS's replacement strategy.

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<sup>1</sup> In addition to Nortel, CMS has been researching many different Phase II vendors and their potential product offerings. These companies include SCC Communications, Technocom Corporation, GTE Telecommunications Services, Cell-Loc, True Position, US Wireless, and SigmaOne Communications Corporation.

<sup>2</sup> In general, the following hardware and software is needed to transmit Phase II data to PSAPs: IS41C – Dialed Number Trigger, E911 Software, MPC – Mobile Positioning Center, PDE – Position Determining Entity, and receivers at each cell site.

## **VII. Other Information**

CMS notes that the remote and rural nature of its service territory in Minnesota can present additional and unforeseen problems when installing and testing location technology. CMS would have a much better handle on how it will eventually implement its Phase II plan if the vendor products were available for testing. Unfortunately, CMS's Phase II implementation plan depends, in large part, upon the schedules and plans of the vendors.

November 9, 2000